REMARKS

In the Final Office Action, the Examiner noted that claims 1-27 are pending in the application and that claims 1-27 are rejected. In view of the following discussion, the Applicants submit that none of the claims now pending in the application are anticipated under the provisions of 35 U.S.C. §102 or are obvious under the provisions of 35 U.S.C. §103. Thus, the Applicants believe that all of these claims are now in condition for allowance.

I. REJECTION OF CLAIMS 1-7, 10-16 AND 18-27 UNDER 35 U.S.C. §102

The Examiner rejected claims 1-7, 10-16, and 18-27 as being anticipated by the Stewart et al. patent (United States patent number 6,009,091, issued December 28, 1999, hereinafter Stewart). The rejection is respectfully traversed.

Stewart teaches a Dedicated Physical Location Channel (DPLCH) that is utilized by a mobile station to support subscriber location functions. The DPLCH is spread by an Orthogonal Variable Spreading Factor (OVSF) code C.sub.L of length 256 which is distinct from those OVSF codes assigned to other channels utilized by the mobile station. When a power-up function (PUF) is received by the mobile station, the DPLCH sub-channel amplitude is then modified relative to the other channels being utilized by the mobile station using gain module G.sub.L prior to combination with the other channels (see Abstract).

Stewart, however, does not teach each and every element of Applicants' invention as recited in independent claims 1, 18, 21, 24, and 27. Namely, Stewart does not teach or suggest the simulcasting of signals to a mobile station from a plurality of base stations. Specifically, Applicants' independent claims 1, 18, 21, 24 and 27 respectively recite:

> 1. A method for determining the location of a mobile station, comprising:
> receiving a plurality of simulcast signals from respective base stations;
> determining relative time of arrival information for the received plurality of simulcast signals; and
> determining the position of the mobile station. (Emphasis added)
>
> 18. A method for receiving location information for a mobile station, comprising:

transmitting simulcast signals to the mobile station; and
receiving mobile station location information from the mobile station determined from relative time of arrival information for the simulcast signals. (Emphasis added)

21. A mobile station, comprising:
a receiver for receiving simulcast signals from a plurality of base stations; and
a processor for determining time of arrival information for the received simulcast signals and identifying a location of the mobile station. (Emphasis added)

24. A wireless network for providing location specific information to a mobile station, comprising:
a plurality of base stations for transmitting simulcast signals;
a mobile station for receiving the simulcast signals and determining a location of the mobile station. (Emphasis added)

27. A wireless network, comprising:
a plurality of base stations for transmitting simulcast signals to mobile stations and receiving mobile station location information from at least one of the mobile stations to broadcast location specific information to the mobile stations. (Emphasis added)

The Applicants' invention teaches a method for determining the location of a mobile station utilizing simulcasted signals that are transmitted from a plurality of base stations. Simulcasting is the transmission of a particular signal from a plurality of base stations at the same moment in time. Specifically, the Applicants describe simulcasting as the "simultaneous transmission of the same information content from multiple base stations" (see e.g., Applicants' specification, page 5, paragraph 3).

Conversely, the Stewart reference does not teach this aspect of the invention. Notably, Stewart does **not** teach or mention the simultaneous transmission of identical information content from multiple base stations anywhere in the patent.

The Examiner asserts that Stewart teaches, inherently that the signals from the base stations have to be transmitted at the same time (simulcast) in order for the mobile to calculate the time difference of the arriving signals. (Final Office Action, dated 2/7/06, page 2, section 1.) However, Stewart teaches in direct contradiction to the Examiner's assertion of inherency. Stewart teaches that the Time Difference of Arrival (TDOA) can be calculated independently for a single base station. (See Stewart, col. 2, ll. 8-43, emphasis added.) Stewart continues to teach that "this time delay estimate can then be combined with time-delay estimates from other BSs (i.e. base stations) and used in the derivation of MS location using, for example, the TDOA technique." (See Stewart, col.

2, ll. 40-43, emphasis added.) Directly contrary to the Examiner's assertion, Stewart teaches that each time delay estimate can be calculated independently for each base station. Therefore, if each time delay estimate can be calculated independently, then the signals from the base stations do not necessarily have to be transmitted at the same time. The passages cited by the Examiner use the TDOA method as explained above, which do not teach or suggest a method for determining the location of a mobile station utilizing simulcasted signals that are transmitted from a plurality of base stations.

Moreover, the Examiner alleges that Stewart teaches this aspect in column 4, line 66 to column 5, line 27, but the Applicants respectfully disagree. The Applicants instead submit that this section in Stewart discloses two methods that respectively teach 1) the importance of accurately knowing the total time delay along each of three mobile stations to base station paths and 2) the importance of the time differences in the arrival of signals at the mobile station from each base station. Both of these methods are disclosed by Stewart in the absence of teaching the simulcasting of signals. More specifically, the first method (i.e., the TOA method) states that it is necessary to know precisely the instant the signal is emitted from the base stations and the instant it arrives at the mobile station. However, there is absolutely no mention or teaching that the signals must be transmitted at the same exact time. In fact, Stewart states that "in this method therefore, the location estimate can be obtained without knowledge of the absolute arrival time of the signal from each BS at the MS, only time differences in arrival are significant". (See Stewart, Column 5, lines 24-27). Thus, Stewart clearly stated that it doesn't matter when the signal is received, but only that the differences in arrival time are relevant. Thus, Stewart is only concerned about how long it took the signal from each BS to arrive at the MS. There is absolutely no teaching that all the BS signals are simulcasted. Nor can this significant aspect be implied since this method taught by Stewart is a radio triangulation technique that does not require a signal to be simulcasted (see Stewart, column 5, lines 8-14). Triangulation technique can operate effectively without the signals being simulcasted, thereby clearly undermining the Examiner's assertion of inherency.

Similarly, the second method (e.g., the TDOA method) taught by Stewart does not require a signal to be simulcasted since the location estimated is determined by estimating the time difference between base station observations of a signal transmitted by the mobile station (which also differs from the claimed invention, i.e., signals are transmitted to the mobile station) (see Stewart, column 5, lines 28-38).

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). Since Stewart does not disclose a plurality of base stations simulcasting signals to a mobile device, Stewart does not teach each and every element of the Applicants' invention as set forth in claims 1, 18, 21, 24 and 27. Therefore, the Applicants contend that claims 1, 18, 21, 24 and 27 are not anticipated by Stewart and, as such, fully satisfy the requirements of 35 U.S.C. §102

Dependent claims 2-7, 10-16, 19, 20, 22, 23, 25 and 26 depend, either directly or indirectly, from claims 1, 18, 21 and 24 and recite additional features thereof. As such and for the exact same reasons set forth above, the Applicants submit that claims 2-7, 10-16, 19, 20, 22, 23, 25 and 26 are also not anticipated by the teachings of Stewart. Therefore, the Applicants submit that claims 2-7, 10-16, 19, 20, 22, 23, 25 and 26 fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder.

II. REJECTION OF CLAIMS UNDER 35 U.S.C. §103

A. Claims 8 and 9

The Examiner rejected claims 8 and 9 as being unpatentable over Stewart. The rejection is respectfully traversed. Stewart is discussed above.

The Examiner states the Stewart fails to disclose various techniques of locating a mobile station such as GPS and Doppler Shift. However, the Examiner contends that such techniques are well known in the art, and thus, takes official notice as such. The Examiner's attention is directed to the fact that Stewart in view of the official notice fails to disclose the simultaneous transmissions of a signal (i.e., simulcasting) from a plurality of base stations to a mobile station as described by the Applicants' invention. Since the

combination of the Stewart and the official notice fails to teach or suggest the Applicants' invention as a whole, the Applicants contend that claims 8 and 9 are not made obvious by Stewart in view of the Official Notice and, as such, fully satisfy the requirements of 35 U.S.C. §103. Furthermore, the Applicants respectfully challenge the Examiner's use of the Official Notice and request that the Examiner provide support for the Examiner's Official Notice. In particular, the Applicants respectfully request that the Examiner provide the references that teach or suggest the various techniques of locating a mobile station, which are referred to on page 3 of the Office Action.

Dependent claims 8 and 9 depend, either directly or indirectly, from claim 1 and recite additional features thereof. As such and for the exact same reasons set forth above, the Applicants submit that claims 8 and 9 are not made obvious by Stewart in view of the Official Notice. Therefore, the Applicants submit that claims 8-9 fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

B. Claim 17

The Examiner rejected claim 17 as being unpatentable over Stewart in view of the Oren patent (United States patent 6,725,045, hereinafter Oren). The rejection is respectfully traversed.

Stewart is discussed above.

Oren teaches a method and system for locating people and routing telephone calls to telephone stations selected by the called party. According to some embodiments of the present invention, the system may include wireless personal units and a location and routing unit adapted to locate the personal units and to route an incoming call intended for a telephone user associated with a particular personal unit to any one of the telephone stations selected by the telephone user (see Abstract).

The Examiner's attention is directed to the fact that Stewart and Oren (either singly or in any permissible combination) fail to disclose the simulcasting of signals from a plurality of base stations that is received at a mobile station as described by the Applicants' invention. Stewart fails to teach the simultaneous transmission of signals from a plurality of base stations that is received at a mobile station. Similarly, Oren also

does not teach, suggest, or mention the simultaneous transmission of signals from a plurality of base stations that is received at a mobile station. Since Oren fails to bridge the substantial gap existing between the Applicants' invention and Stewart, the Applicants contend that the combination of Stewart and Oren does not teach the Applicants' invention as a whole.

Therefore, even if the two references could somehow be operably combined (and the Applicants submit that the references cannot be properly combined), the resulting combination of Stewart and Oren would still fail to mention or suggest the simultaneous transmission of signals from a plurality of base stations that is received at a mobile station as claimed in independent claim 1.

Thus, the Examiner has failed to present a prima facie case of obviousness in combining Stewart with Oren to arrive at the claimed invention of Applicants' claim 17 since this claim depends indirectly from claim 1. Therefore, the Applicants submit that claim 17 fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Withdrawal of the rejection is respectfully requested.

III. CONCLUSION

Thus, Applicants submit that none of the claims presently in the application are anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Consequently, Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the maintenance of the present adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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